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ABSTRACT

The requirement of the state of Louisiana that teaching certificates be renewed for all state teachers led to the development of the System for Teaching and Learning Assessment and Review (STAR), an on-the-job teacher evaluation process. This study examines the relationship between student perceptions of their classroom environment and teacher performance as assessed by the STAR. A principal, master teacher, and outside observer used the STAR to assess 24 elementary school teachers who were teaching kindergarten through 5th grade classes. The STAR measures 23 teaching and learning components in 4 performance dimensions. Students' perceptions of their classroom were measured by means of the My Classroom Inventory (MCI). This instrument measures dimensions of cohesiveness, friction, satisfaction, difficulty, and competitiveness. Results indicated the highest correlations between: (1) satisfaction on MCI and the Classroom Routines and Feedback components of the STAR; (2) competitiveness on MCI and the Aids and Materials, Teaching Methods, Content Accuracy, and Monitoring Learning Tasks components of the STAR; (3) satisfaction on MCI and the Student Engagement component of the STAR; and (4) difficulty on MCI and the Student Engagement component of the STAR. A reference list of 18 items is included. (BC)

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STUDENT PERCEPTIONS OF THE LEARNING ENVIRONMENT ASSESSMENTS OF TEACHER PERFORMANCE AND STUDENT LEARNING

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It is known that school culture or climate influences academic achievement, attendance, and student perceptions of cohesiveness and satisfaction (Fraser, 1986). However, how students perceive their classroom and the teachers' capabilities may differ. Teachers experience interactions with all students, whereas students experience their own interactions and vicariously observe others' interactions with the teacher (Weinstein, 1982).

Studies concerned with student perceptions of the classroom typically focus on the perceived psychosocial climate or learning environment of the classroom. Fraser and Walberg (1981) suggest that student perceptions of characteristics of the classroom are preferable over naturalistic study or classroom observational methods for their economy, comprehensiveness, robustness and predictive ability. The literature on student perceptions of classroom learning environments indicates that the most widely used instruments for assessing students' perceptions of their classroom climate include the Learning Environment Inventory (LEI) and the related My Classroom Inventory (MCI) for use at the elementary school level (Fraser and Fisher, 1983), and the Classroom Environment Scale (CES) (Moos and Trickett,1974).

Moos (1974) has characterized all human environments as having relationship dimensions (in classrooms, characterized by the degree of involvement, affiliation and teacher support), personal development dimensions (task orientation and competition) and system maintenance and change dimensions (order and organization, rule clarity, teacher control and innovation). This conceptualization has been supported by a factor analysis of Classroom Environment Scale

data. There has been a number of research investigations on teaching behaviors which produce student cognitive, affective, and behavioral outcomes (Ellett, 1986). Some of these studies have been conducted to validate various models of teaching, some by the need to conduct criterion-related validity studies of teacher observation/evaluation instruments, and some by large-scale process/product studies. The results of these studies suggest that there is an accumulating body of effective teaching practices literature (Peterson & Walberg, 1979). There is a need in the literature for how specific teaching behaviors relate to or alter characteristics of the learning environment. Other than the more obvious effects of learning environments such as increased student on-task behavior and time allocated for instruction, few studies have examined the relationships between teaching behaviors and characteristics of the psychosocial learning environment (Ellett, Capie, & Johnson, 1980; Ehman 1980).

Louisiana has followed the trend in developing legislation for assessing teachers and educational reform. The 1984 Teaching Internship Program Law and the 1988 Children First Act, which called for renewable teaching certificates for all state teachers lead to the development of The System for Teaching and learning Assessment and Review (STAR). The STAR is a comprehensive, on-the-job assessment process designed to build on the efforts of other states to identify and assess elements of teaching reflected in the extant process/product literature on effective teaching (Brophy, 1986; Porter & Brophy, 1986) and newer concerns about the assessment of knowledge of content, pedagogy and curriculum (Shulman, 1986).

This research was conducted to examine the relationships between elementary student perceptions of their classroom environment and teacher performance assessed by the STAR. The following questions guided the research: 1)Is there a relationship between student perception of the classroom environment and how a teacher performs in the teaching and learning setting? 2) Are there differences between student engagement rate and how the student perceives the learning environment?

Data Sources and Methods

Data for this study were collected during the late spring of 1989 in five elementary schools. The sample consisted of twenty four elementary teachers in grades kindergarten through fifth. The observers consisted of the school principal, a master teacher located in the same school, and an outside observer. The twenty four teachers were assessed on the STAR (System for Teaching and learning Assessment and Review), (Ellett, Loup, and Chauvin, 1989), on two occasions by each of the three observer types. All data were collected confidentially, and no discussion of results with assessed teachers occurred until all six observations were completed and summarized. A total of 144 assessments were completed (24 teachers X 6 observations).

The observers in this study were trained by project staff immediately preceding data collection. All assessors, except for the outside observers, completed an abbreviated 4-5 day training program, but were considered proficient enough to conduct accurate

assessments. The outside observers were project staff members, who had not only been trained, but had also provided extensive training to others on the STAR system. The current version of the STAR contains 140 indicators of teacher effectiveness and student learning. These indicators are classified into four Performance Dimensions (Preparation, Planning, Evaluation; Classroom/Behavior Management; Learning Environment; Enhancement of Learning) operationalized by 23 Teaching and Learning Components. The components include concepts such as lesson initiation, pace, sequence, aids/materials, time management, maintaining appropriate behavior, routines, thinking skills, monitoring learning, informal assessment, etc. The twenty four teachers were asked to prepare a Comprehensive Unit Plan following the guidelines of the STAR preparation, planning, and evaluation dimension. Each teacher was observed six times consistent with the plan. The STAR assessment process required assessors to observe for the full period of a lesson (typically 50-55 minutes) while taking comprehensive notes including periodic estimates of student engagement rates. The observation focus is the total classroom learning environment. All completed assessments were returned to the project office for keypunching and data analysis.

In addition, students' perceptions of the classroom were measured by My Classroom Inventory, (MCI), (Fraser & Fisher, 1983). This instrument measures dimensions of classroom environment: cohesiveness, friction, satisfaction, difficulty, and competitiveness. Student satisfaction indicates how a pupil feels about his/her class (e.g. is he/she pleased with the class?, does

he/she think it is fun?). Competitiveness includes how students feel about their classwork in relation to the rest of the class (e.g. racing to finish work first, wanting to do better than their peers). Difficulty is the students' perception of how difficult their schoolwork is (e.g. in our class the work is hard to do, only the smart people can do the work, some say our work is too easy). Friction includes student interpersonal relations in the class (e.g. children are always fighting in our class, some pupils don't like each other). Cohesiveness includes how the class gets along together (e.g. in my class everyone is my friend, all of the children know each other very well). The MCI was administered by an independent data collector during the two week research study.

Results

The teacher assessment data collected by the observers was assessed on each teaching and learning component under each dimension. The STAR is based on the assumption that a teaching/learning component is a complex set of interrelated behaviors. Each component is defined by a number of assessment indicators. As noted in Figure 1, the number of assessment indicators per teaching/learning component, for the seventeen components here, range from one (student engagement) to fifteen (psychosocial learning environment). The MCI instrument dimension data was compiled on cohesiveness, friction, satisfaction, difficulty, and competitiveness.

Correlations were done on the relationships between the teaching and learning components assessed by the STAR and the

dimensions from the MCI. Several of the correlations were found to be significant.

Student satisfaction and the teaching/learning component, Classroom Routines had a correlation coefficient of .525. Classroom routines are organizational activities which are necessary for efficient and effective teaching and learning. Such routines include procedural directions necessary to implement teaching and learning activities. The correlation coefficient between satisfaction and teaching/learning component Feedback was .526. A key element in guiding and enhancing learning is providing specific feedback to students about their performances and mastery of learning objectives. Feedback is more than providing information abut correct , and incorrect performances. Effective feedback includes suggestions for improving performance and encouragement of subsequent effort.

Competitiveness and the use of Aids and Materials had a correlation coefficient of .598. Aids are the "things" that teachers use to enhance learning, and materials are the "things" that students use to enhance learning. The teaching/learning component Teaching Methods and Learning Tasks was correlated with competitiveness at .489. Teaching methods are the regular and orderly procedures and techniques used by the teacher to enhance learning. A learning task is the objectives-related activity planned for students to do. Competitiveness and Content Accuracy and Emphasis had a correlation coefficient of .467. This teaching/learning component includes that information presented by the teacher is timely, accurate and current. Content is

differentiated at more than one cognitive level and emphasis is given to structuring frameworks for knowledge, important elements of subject matter and learning tasks. Competitiveness and Monitoring Learning Tasks and Informal Assessment had a correlation coefficient of .519. This teaching/learning component involves actively monitoring student involvement in learning tasks throughout the lesson and informal assessment techniques that provide the teacher with information about students' understanding of content and learning tasks. Monitoring and informal assessment activities should be continuous throughout the lesson.

Another teaching and learning component assessed with the STAR focuses on active student engagement. Student engagement is overt and/or covert student involvement in objectives-related activities. Student engagement rates were estimated through systematic observation of task-related behavior of all students throughout the lesson. Student engagement and student satisfaction had a correlation coefficient of .511. Also correlated with student engagement was the student perception dimension difficulty. A correlation coefficient of -.661 was obtained.

Between dimensions of the MCI several correlations approached significance. They were friction and cohesiveness at .482, satisfaction and friction -.418 and satisfaction and difficulty -.450.

Discussion

The results of this investigation provide some important

information about students' perceptions of their learning environment and how the teacher actually performs in this environment. Students had a more positive perception of the classroom when they knew what was expected of them and when the teacher used time efficiently in managing classroom routines. This supports the findings of Herman and Traymontana (1971) and Advani and Beaumaster (1973) that the establishment of specific classroom rules by teachers leads to a reduction in disruptive pupil behavior and facilitates the establishment of consistent classroom routines.

Students had a more positive perception of teachers that provided specific feedback to the class. Students were more satisfied when they received suggestions for improving their performance in the class and continuous encouragement.

Students felt a stronger competitive spirit among their peers related to the use of aids and materials. This could have implications for students' eagerness to use the materials as a motivating factor in enhancing the teaching and learning process. Teachers that used methods that enhance student interest and actively involve students in learning tasks were found to have students with a strong competitive spirit. Studies indicate that effective teachers utilize teaching methods and activities which are appropriate to the subject matter, and which serve to promote greater inquiry, task orientation and involvement in learning among students (Soar, 1973; Stallings and Kaskowitz, 1972-1973). Students were also more competitive that received opportunities to learn at more than one cognitive level, and the teacher emphasized the value and importance of topics and activities in the lesson.

Competitiveness and monitoring learning tasks/informal assessment relate to the students desire to complete their tasks faster and receive positive approval from the teacher informally assessing these tasks.

Classrooms that had higher student engagement rates were found to have positive student perceptions of pupil satisfaction in the class. Hinely and Ponder (1981) found that successful managers have classrooms characterized by well-established routines, use brief, non-threatening corrective responses and use other strategies to maintain student engaged behavior. Students who perceived their classwork to be difficult were also poorly engaged. This finding could have further implications for the STAR teaching and learning components of clarification, feedback, and informal assessment.

Based on these findings it appears that student perceptions relate to teacher performance in the classroom. Student perceptions of competitiveness, satisfaction, and difficulty encourage further research on how teacher performance influences the classroom learning environment.

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Figure 1

PERFORMANCE DIMENSION II : CLASSROOM BEHAVIOR MANAGEMENT (30)

TEACHING/LEARNING COMPONENTS

A.	Time (8)	Component # 7
B.	Classroom Routines (4)	Component # 8
C.	Student Engagement (1)	Component # 9
D.	Managing Task-Related Behavior (7)	Component #10
E.	Monitoring/Maintaining Student Behavior (10)	Component #11

PERFORMANCE DIMENSION III: LEARNING ENVIRONMENT (20)

TEACHING/LEARNING COMPONENTS

A.	Psychosocial Learning Environment (15)	Component #12
B.	Physical Learning Environment (5)	Component #13

PERFORMANCE DIMENSION IV: ENHANCEMENT OF LEARNING (68)

TEACHING/LEARNING COMPONENTS

A.	Lesson/Activities Initiation (10)	Component #14
B.	Teaching Methods (5)	Component #15
C.	Sequence/Pace (5)	Component #16
D.	Aids and Materials (10)	Component #17
E.	Content Accuracy/Emphasis (8)	Component #18
F.	Thinking Skills (11)	Component #19
G.	Clarification (5)	Component #20
H.	Monitoring Learning Activities/ Informal Assessment (6)	Component #21
I.	Feedback (4)	Component #22
J.	Oral/Written Communication (4)	Component #23

NOTE: The numbers in parentheses note the number of assessment indicators comprising the three performance dimensions and seventeen teaching/learning components.

Figure 1

STAR Performance Dimension and Teaching/Learning Components
Used in Student Perceptions of the Learning Environment,
Assessments of Teacher Performance and Student Learning

Figure 1

PERFORMANCE DIMENSION II : CLASSROOM BEHAVIOR MANAGEMENT (30)

TEACHING/LEARNING COMPONENTS

A.	Time (8)	Component # 7
B.	Classroom Routines (4)	Component # 8
C.	Student Engagement (1)	Component # 9
D.	Managing Task-Related Behavior (7)	Component #10
E.	Monitoring/Maintaining Student Behavior (10)	Component #11

PERFORMANCE DIMENSION III: LEARNING ENVIRONMENT (20)

TEACHING/LEARNING COMPONENTS

A.	Psychosocial Learning Environment (15)	Component #12
B.	Physical Learning Environment (5)	Component #13

PERFORMANCE DIMENSION IV: ENHANCEMENT OF LEARNING (68)

TEACHING/LEARNING COMPONENTS

A.	Lesson/Activities Initiation (10)	Component #14
B.	Teaching Methods (5)	Component #15
C.	Sequence/Pace (5)	Component #16
D.	Aids and Materials (10)	Component #17
E.	Content Accuracy/Emphasis (8)	Component #18
F.	Thinking Skills (11)	Component #19
G.	Clarification (5)	Component #20
H.	Monitoring Learning Activities/ Informal Assessment (6)	Component #21
I.	Feedback (4)	Component #22
J.	Oral/Written Communication (4)	Component #23

NOTE: The numbers in parentheses note the number of assessment indicators comprising the three performance dimensions and seventeen teaching/learning components.

Figure 1

STAR Performance Dimension and Teaching/Learning Components
Used in Student Perceptions of the Learning Environment,
Assessments of Teacher Performance and Student Learning

TABLE 1

Correlation Coefficients of the STAR Teaching/Learning Components and the Dimensions of Classroom Environment

	#7 Time	#8 Classroom Routines	#9 Student Engagement
Student Engagement	.532	.543	.610
Cohesiveness	.279	.009	.438
Friction	-.011	-.284	-.115
Difficulty	-.296	-.332	-.661
Satisfaction	.259	.525	.424
Competitiveness	.368	.232	.101

	#10 Managing Task-Related	#11 Monitoring/ Maintaining	#12 Psychosocial Environment
Student Engagement	.478	.592	.510
Cohesiveness	.294	.248	.056
Friction	.023	-.094	-.242
Difficulty	-.225	-.278	-.180
Satisfaction	.176	.393	.378
Competitiveness	.209	.334	.389

	#13 Physical Learning Environment	#14 Lesson/Activities Initiation	#15 Teaching Methods
Student Engagement	.380	.303	.530
Cohesiveness	.056	-.051	.238
Friction	-.066	-.134	.098
Difficulty	-.099	-.018	.087
Satisfaction	.056	.256	.219
Competitiveness	.453	.245	.489

	#16 Sequence/Pace	#17 Aids/Materials	#18 Content Accuracy/Emphasis
Student Engagement	.566	.558	.210
Cohesiveness	.107	.326	-.032
Friction	-.139	.036	-.198
Difficulty	-.199	-.102	-.054
Satisfaction	.400	.289	.281
Competitiveness	.323	.598	.467

	#19 Thinking Skills	#20 Clarification	#21 Monitoring Learning Activities/ Informal Assessment
Student Engagement	.153	.404	.488
Cohesiveness	-.079	.267	.255
Friction	-.224	-.180	.090
Difficulty	-.016	-.309	-.050
Satisfaction	.229	.286	.255
Competetiveness	.370	.355	.519

	#22 Feedback	#23 Oral/Written Communication
Student Engagement	.510	.571
Cohesiveness	.001	.105
Friction	-.086	.083
Difficulty	-.209	.082
Satisfaction	.526	.187
Competitiveness	.453	.202

TABLE 2

Correlation Coefficients
Between Dimensions of Classroom Environment

	Student	Cohesiveness	Friction	Difficulty	Satisfaction	Competitiveness
Student Engagement	1.00	.261	-.088	-.405	.511	.362
Cohesiveness	.261	1.00	.482	-.228	-.023	.117
Friction	-.088	.482	1.00	.225	-.418	.174
Difficulty	-.405	-.228	.225	1.00	-.450	-.132
Satisfaction	.511	-.023	-.418	-.450	1.00	.169
Competitiveness	.362	.117	.173	-.132	.169	1.00